		· ····································	No. or piages oz			
		Seat No.:				
1	9-12]	SARDAR PATE	L UNIVERSTITY			
Ľ	M.S		GY- VII SEMESTER Examination -2016			
		Date 25th October '2016	TIME: 2:00 to 5.00 pm			
			PCOZCICERA /PCO7CIGMR4·			
		PS07CIGGB4/PS07CIGIB4/ Advanced Mol	<u>PS07CIGEB4/PS07CIGMB4:</u> lecular Biology			
			Max. Marks:70			
		Assessed all the assessions	1x8=8			
Q.1		Attempt all the questions	ed in phosphodiester bond formation.			
	(i)		c)β			
		a) α	d) e			
		b) γ	u) e			
	(ii)	The function of PCNA is to	c) store the energy			
		<b>a</b> <sub>1</sub> <b>a</b> <sub>1</sub>	d)dissociate the enzyme			
5	/***\	the state of the s				
	(iii) The chemical reaction involved in splicing process is  a) Transmethylation c) Transacetylation					
		<ul><li>a) Transmethylation</li><li>b) Transesterification</li></ul>	d) Transacylation			
	a. A	tRNA is synthesized by	uj irunsuojiosion			
	(iv)	a) RNA Pol I	c) RNA Pol II			
		b) RNA Pol III	d) RNA Pol IV			
	- 64					
	: (v)	a) Endoplasmic reticulum	c) Golgi apparatus			
		b) Lysosome	d) Plasma-membrane			
	(vi) The rotation of aminoacyl tRNA prior to peptide bond formation is termed					
	(41)	as				
		a) Translocation	c) Accommodation			
		b) Scanning	d) Elongation			
	(vii)	A sector of new phenotype is pr	• –			
	(,	a) clonal expansion of normal cells c) clonal expansion of mutant cells				
	b) clonal expansion of mutant and normal cells d) all of the above					
	(viii)	hybrid dysgenesis in Drosophlla				
	• •	a) M male x P female	· · · · · · · · · · · · · · · · · · ·			

Attempt any seven questions

Q.2

b) M male x M female

 $\left[2x7=14\right]$ 

(i) State endosymbiotic theory for evolution of chloroplast and mitochondria?

d) P male x M female

(ii) Mention the significance of presence of multiple origin of replication in eukaryotic DNA.

	(iii)	Give diagrammatic presentation of eukaryotic core promoter.	•		
	(iv)	Mention the functions of hSPT5, TFIIS in transcription process.			
	(v)	Write significance of introns in eukaryotic genome.			
	(vi)	Write the importance of Signal sequence present in protein polypeptide			
	(vii)	Enlist functions of molecular chaperones.			
	(viii)	What is breakage - fusion - bridge cycle in Maize genome?			
	(ix)	Mention the characteristics of cancer cells.			
Q.3	<b>A</b>	Discuss the role of different proteins involved in eukaryotic DNA replicat	tion. <b>[06</b> ]		
	В	Describe the steps in the formation and activation of pre-replicative complex [06]			
		(pre-RC) during eukaryotic DNA replication. Explain the effect of Cdk activit pre-RC formation and activation.	y on		
		OR			
	В	(i)Discuss types of eukaryotic DNA polymerases. (ii) Explain promoter escape.	[06]		
Q.4	Α	Discuss initiation of transcription process by RNA polymerase II & III.			
	В	Discuss the role of Histone modification in transcription regulation.  OR	[06]		
	В	Describe eukaryotic transcriptional elongation in detail.	[06]		
Q.5	Α	Explain various steps in termination of translation in eukaryotes.	[06]		
	В	Discuss the mechanism of nonsense mediated mRNA decay (NMD) and 06 nonstop mediated mRNA decay (NSD) in regulation of eukaryotic translation.			
		OR	<b>~</b> a		
	В	Write a note on protein transport in eukaryotic cell.			
Q.6	Α.	Explain the role of P element in hybrid dysgenesis in Drosophila.	[06]		
	В	Write short note on	[06]		
		(I) Retinoblastoma gene			
		<u>OR</u>			
		(ii) <i>p53</i> gene			